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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,024	01/18/2002	A. Levent Cimecioglu	1958	2119
7590	09/12/2003			3
Laurelee A. Duncan NATIONAL STARCH AND CHEMICAL COMPANY P.O. Box 6500 Bridgewater, NJ 08807-0500			EXAMINER	
			EINSMANN, MARGARET V	
		ART UNIT	PAPER NUMBER	
		1751		

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/053,024	CIMECIOGLU ET AL.
	Examiner	Art Unit
	Margaret Einsmann	1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
- If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a)  The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION*****Claim Rejections - 35 USC § 103***

Claims 1-12, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viikari et al., WO 99/23117.

A process for preparing oxidized cellulose, which comprises bringing a cellulose-containing material into contact with a reactant, such as 2,2,6,6-tetramethylpiperidine-1-oxyl, (TEMPO), which is applicant's mediator as claimed in at least claims 4, 7 and 8, is disclosed in the abstract. On page 5 patentee states that the method can be employed for oxidizing cellulosic textile fibers, yarns and fabrics, selected from cotton, hemp, ramie and viscose. Oxidation will provide fibers, yarns and fabrics with modified properties selected from the group of handle, drapability, softness and water absorbency. Said textile materials and garments prepared therefrom <sup>read</sup> on product claims 18-21. In Example 1 on page 5 lines 23 et seq., patentee exemplifies a process of chemical oxidation of pine craft pulp using aqueous sodium hypochlorite and sodium bromide and TEMPO, which are the reagents claimed in the instant method claims. Table 1 on page 6 discloses that both carboxylic acid groups and aldehyde groups are formed on the cellulosic substrate.

The reference differs from the instant claims because it does not give an example of treating a textile material. Accordingly, it does not disclose the appropriate percentage of chemicals to use in the oxidation process as applied to textiles. It would have been obvious to the skilled artisan that applicant's claims are a variation of the process taught by Viikari et al because they specifically state that it may be used for

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applicant's intended purpose, that is to impart improved properties to cellulosic textiles including improved water absorbency (wicking) as claimed, and because it states on page 2 lines 19 et seq, "A method for selective oxidation is provided, which gives rise to the formation of carboxylic and carbonyl groups at desired ratios in the cellulose. Accordingly, this is a clear teaching that one skilled in the art, reading the disclosed method, can adjust the oxidation parameters to obtain any ratio of carbonyl and carboxylic acid groups desired in the cellulosic textile.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Viikari et al. as applied to the claims above, and further in view of Jaschinski, US 6,409,881. Viikari et al is set forth as applied in the above rejection as disclosing hypohalite oxidation of celluloses using TEMPO as the nitroxyl mediator. They do not describe 4-acetoamido TEMPO as mediator. Jaschinski discloses that 4-Acetoamido TEMPO is equivalent to TEMPO as a mediator in the hypohalite oxidation the hydroxyl groups at C6 of the glucose units on cellulose to aldehyde and/or carboxyl groups. See col 13 lines 4-36, and col 14 lines 55 et seq. It would have been obvious to the skilled artisan to substitute 4-acetoamido TEMPO for TEMPO in the process of Viikari since Jaschinski teaches that they are equivalent for the purpose of mediating the hypohalite oxidation of cellulose.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 4,5,7,8,12-15,18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites "the modified cellulosic textile of claim 2 wherein there is no antecedent basis for said textile in claim 2. Claim 2 claims a process. There is no basis in claim 1 for "the modified textile" as claimed in claim 18. "The" should be replaced with "A"

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19-21 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a textile modified by the specific process described in the claims, does not reasonably provide enablement for any textile having the properties claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. For example, Viikari et al disclosed an equivalent process using enzyme oxidation. Applicant is not enabled for a product having equivalent properties which has been treated by the process of Viikari.

Claims 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the

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invention. There is no disclosure as to how the carbonyl or carboxyl functionalities are modified and or of the properties of the resultant products.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18-21 are rejected under 35 U.S.C. 102 (b) as anticipated by Rowland, US 4,277,243.

Rowland discloses a textile which has durable press properties and hydrophilic properties which are better than an untreated cellulosic textile. The abstract states that the cotton-containing fabric treated by his process has a durable-press appearance, improved abrasion resistance and breaking strength. Column 4 line 38 states that the fabrics have attractive levels of hydrophilic characteristics. (hydrophilic means water or moisture loving.) In column 4 lines 64-68 he states, "Hydrophilic characteristics or textile fibers are readily assessed in terms of moisture regain and water of imbibation ...." These two sections of the disclosure anticipate the instant claims.

Claims 18 and 20 are rejected under 103 (a) as being obvious over Rowland.

The subject matter would have been obvious to the skilled artisan because the patentability of a product by process claim does not depend on its method of production

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and where the examiner has found a similar product, the burden rests with the applicant to prove that that product is patentably distinct. See *In re Thorpe*, 227 USPQ 964 (CAFC 1985); *In re Marosi et al*, 218 USPQ 289; *In re Pilkington*, 162 USPQ 145.

"The lack of physical description in a product-by-process claim makes the determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not the process that must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 173 USPQ 685,688 (CCPA 1972).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret Einsmann whose telephone number is 703-308-3826. The examiner can normally be reached on 7:00 AM -4:30 PM M-Th and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

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872-9310 for regular communications and 703-872-9311 for After Final  
communications.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the receptionist whose telephone number is 703-308-  
0661.

*Margaret Einsmann*  
Margaret Einsmann  
Primary Examiner  
Art Unit 1751

September 5, 2003